

Inequality in the U.S. and Everywhere Else

Measures

Gini Coefficient $\frac{0.5 - \int_0^1 L(s) ds}{0.5}$

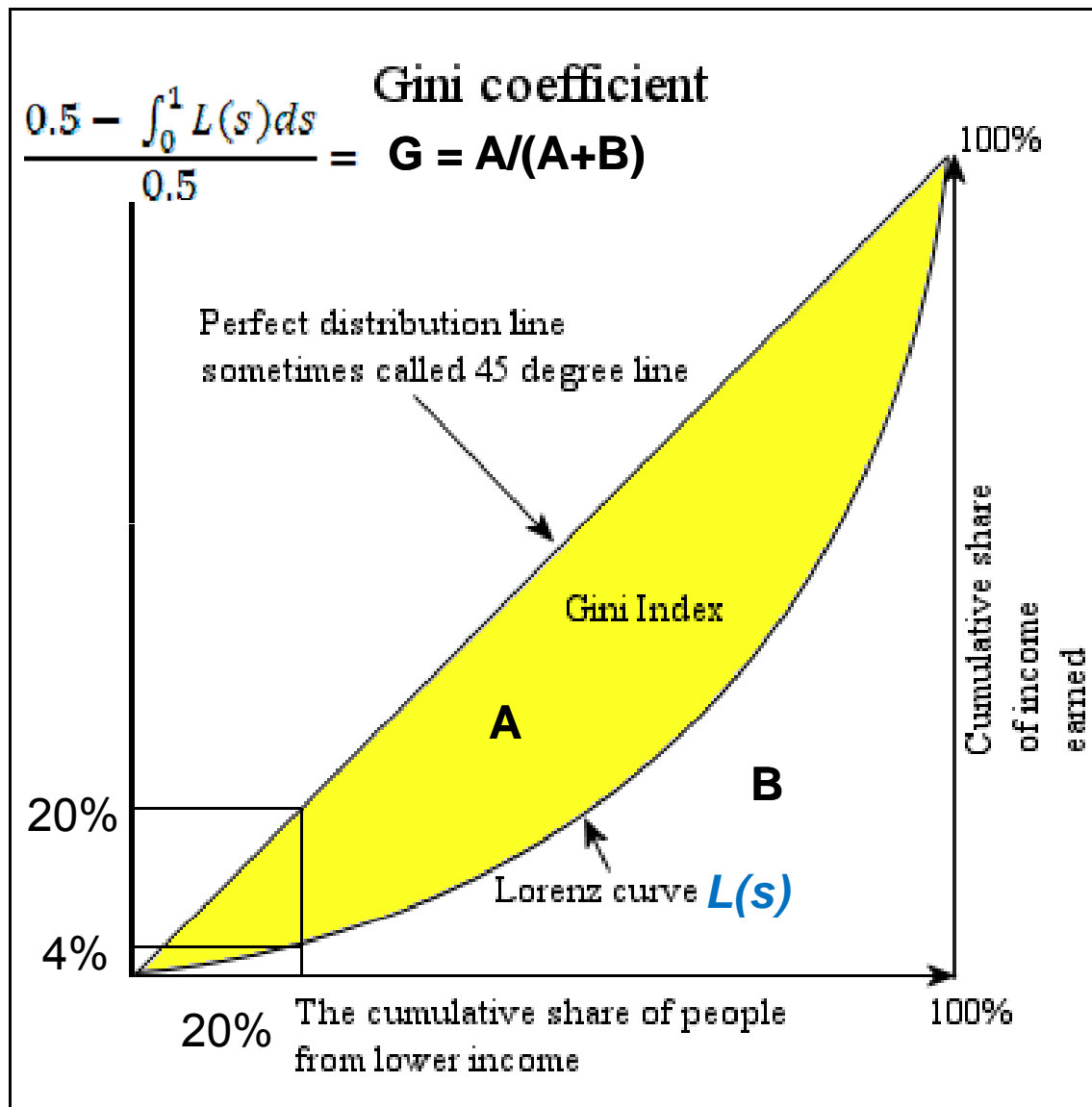
Wage gaps: 90-10; 80-20; ...

$$\ln(W_R) = \ln\left(\frac{W_J}{W_K}\right)$$

Residual Wage Inequality

$$\ln(W) = X' \beta + \epsilon \rightarrow \sigma_\epsilon$$

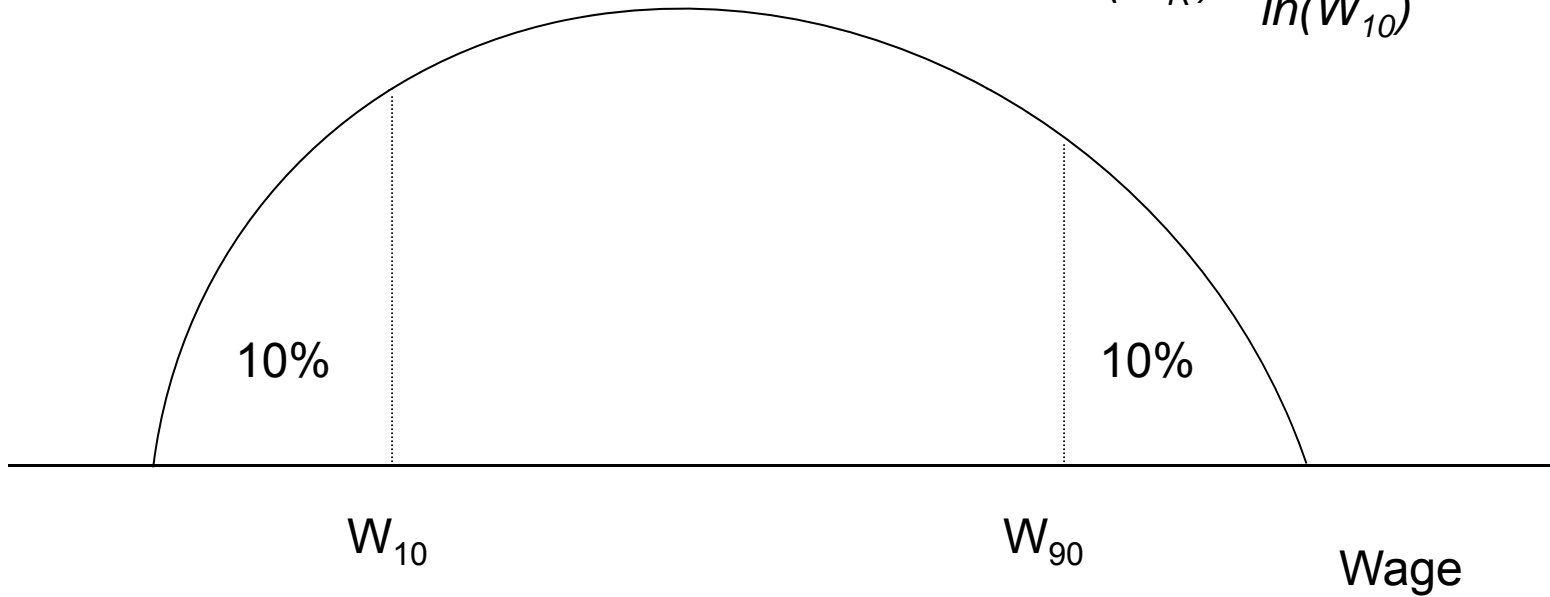
Measures in Table 1, Katz and Autor (1999) *Handbook of Labor Economics*
Vol 3A, Chpt 26 were correlated at 0.99



Perfect equality = $0 < G < 1$ = Perfect inequality

Wage ratios

$$\ln(W_R) = \frac{\ln(W_{90})}{\ln(W_{10})}$$



Gini coefficients for families in the United States, 1947-2009

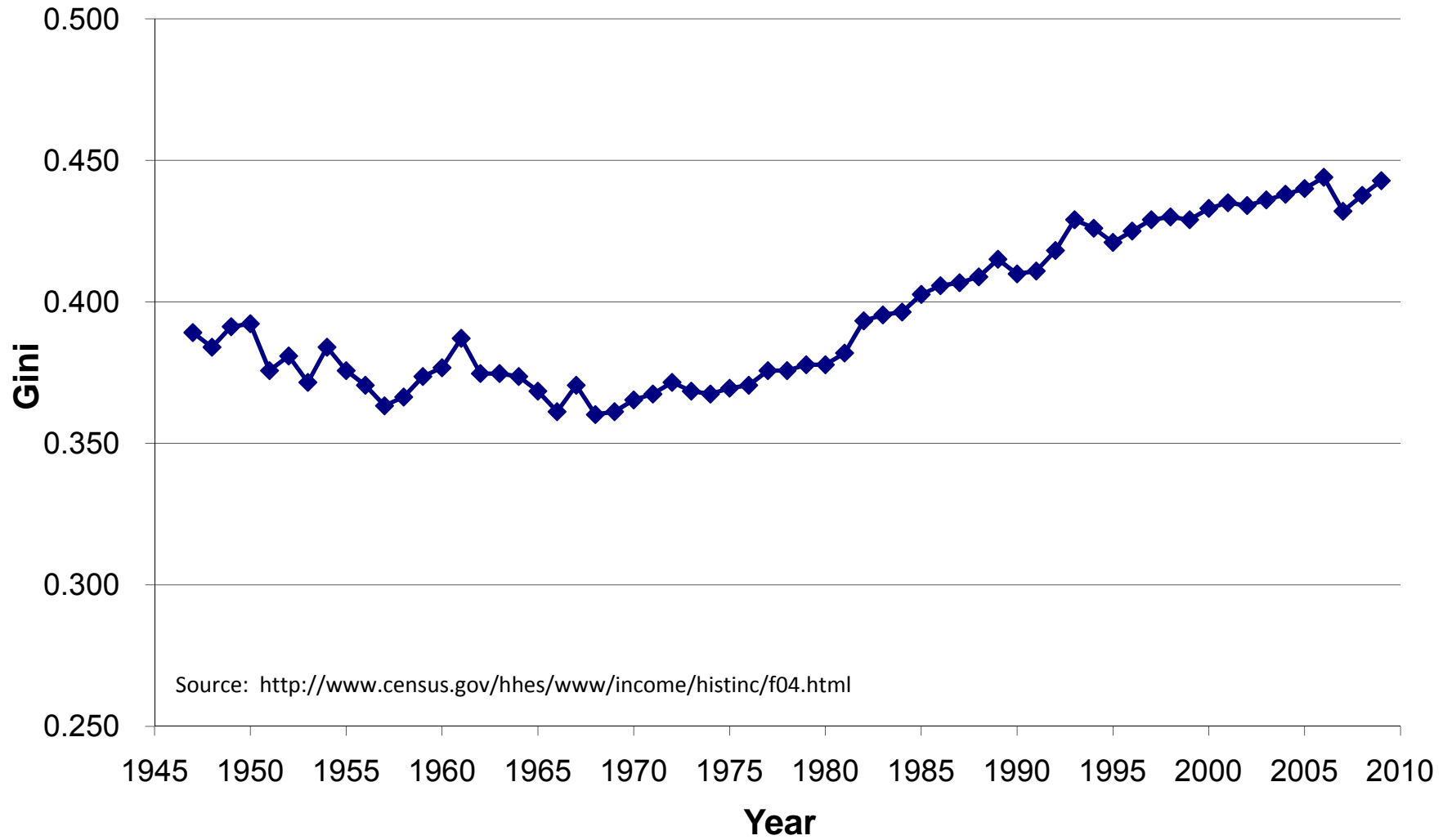


Figure 2.9 Africa and Latin America have the world's highest levels of inequality
 Income and expenditure Gini coefficients

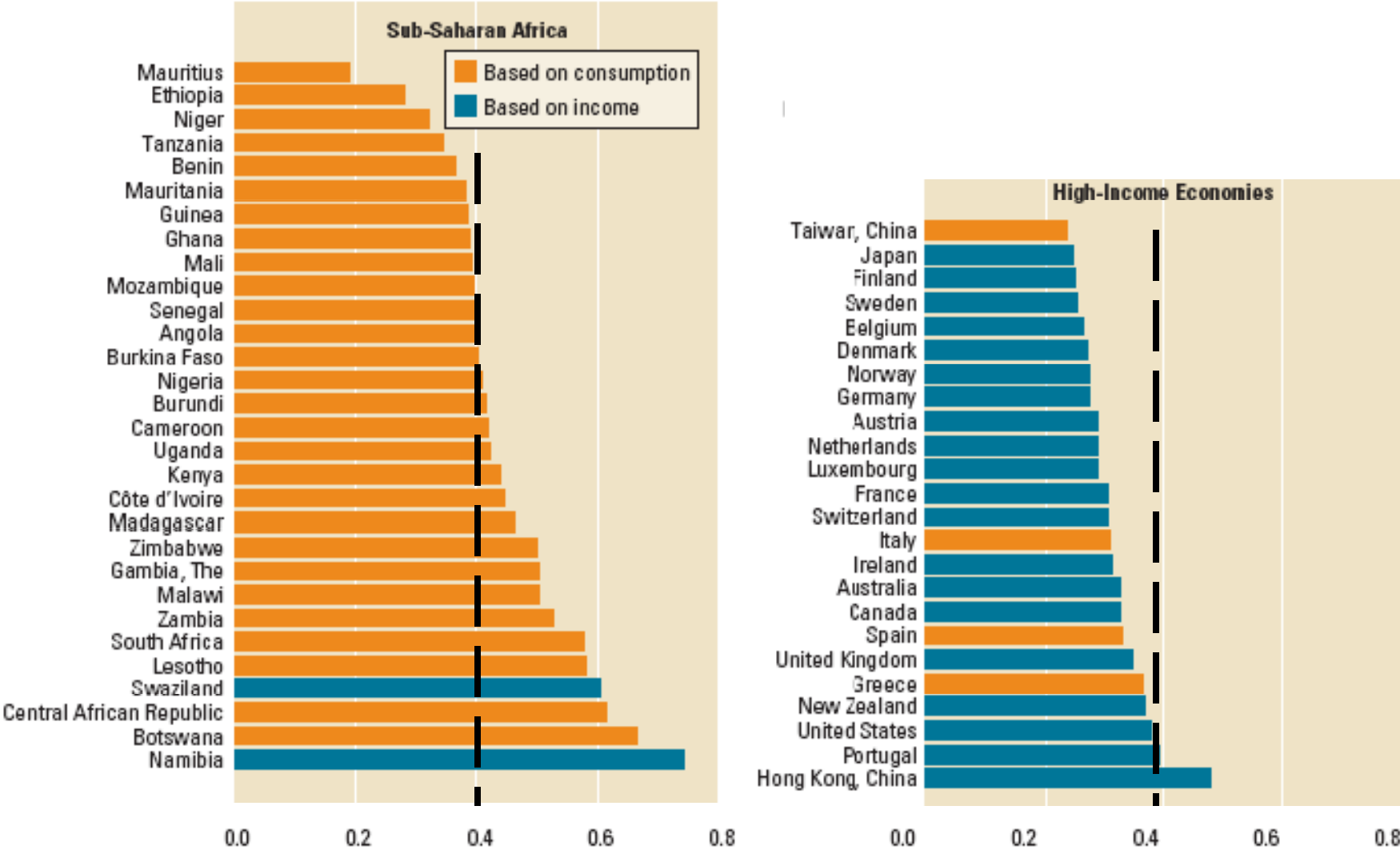


Figure 2.9 Africa and Latin America have the world's highest levels of inequality
Income and expenditure Gini coefficients

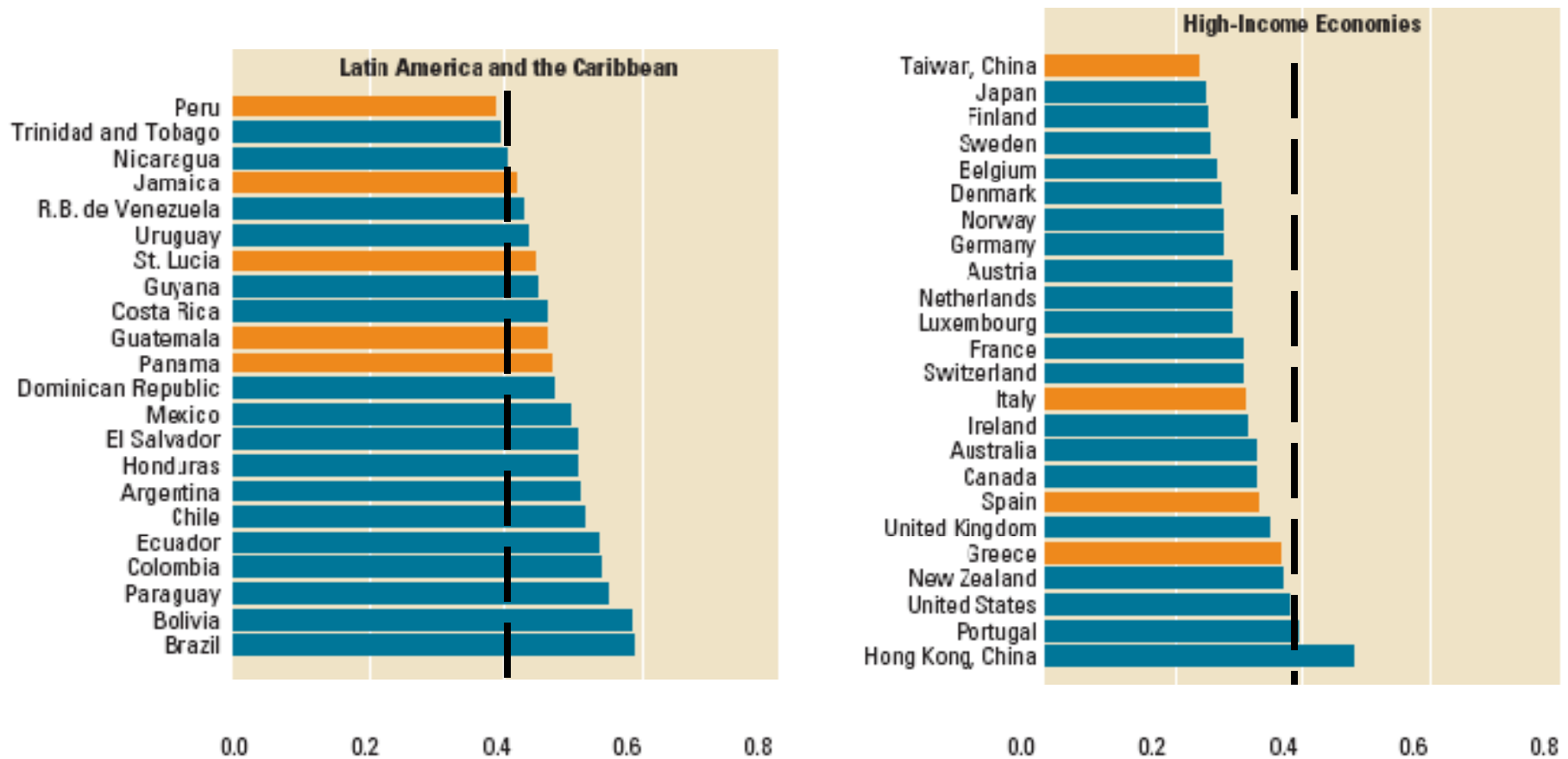
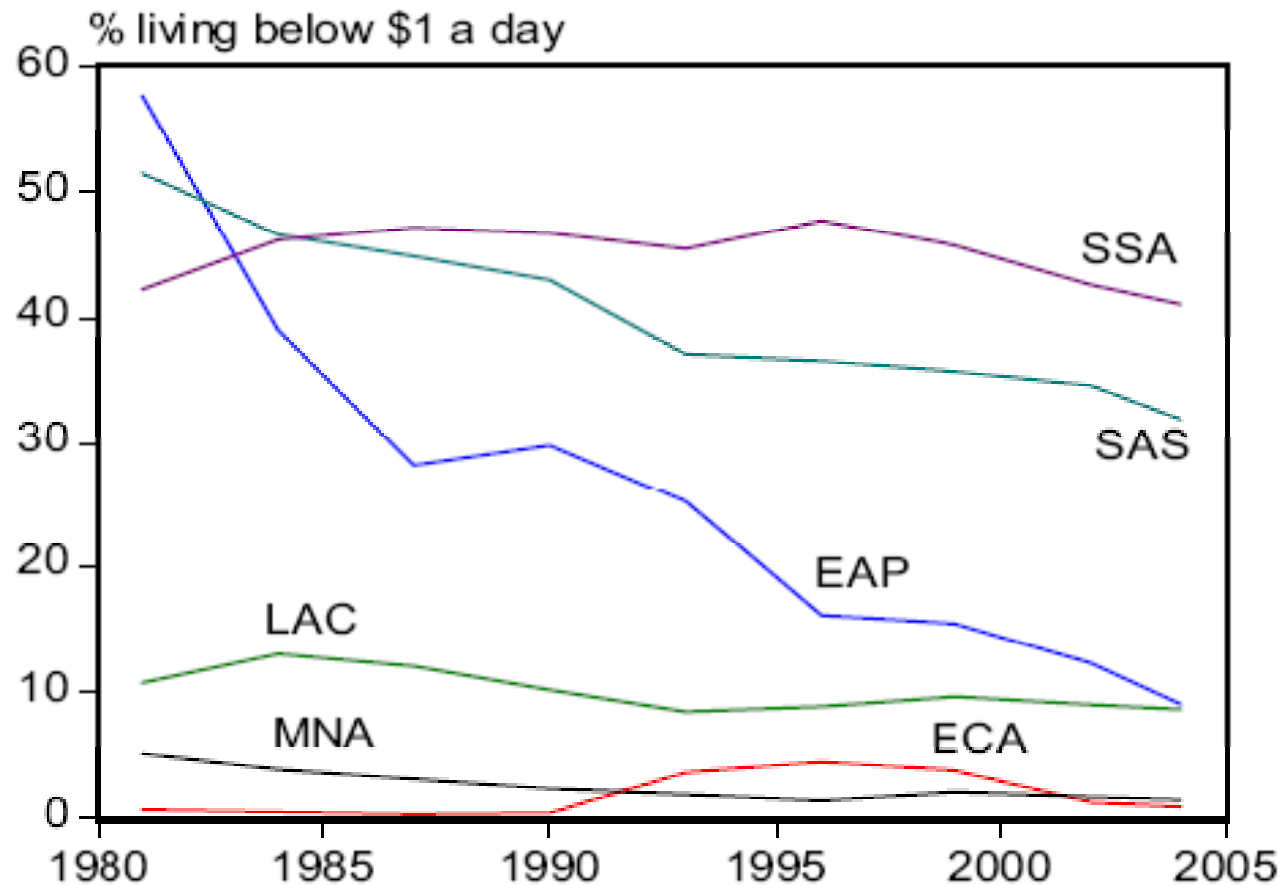


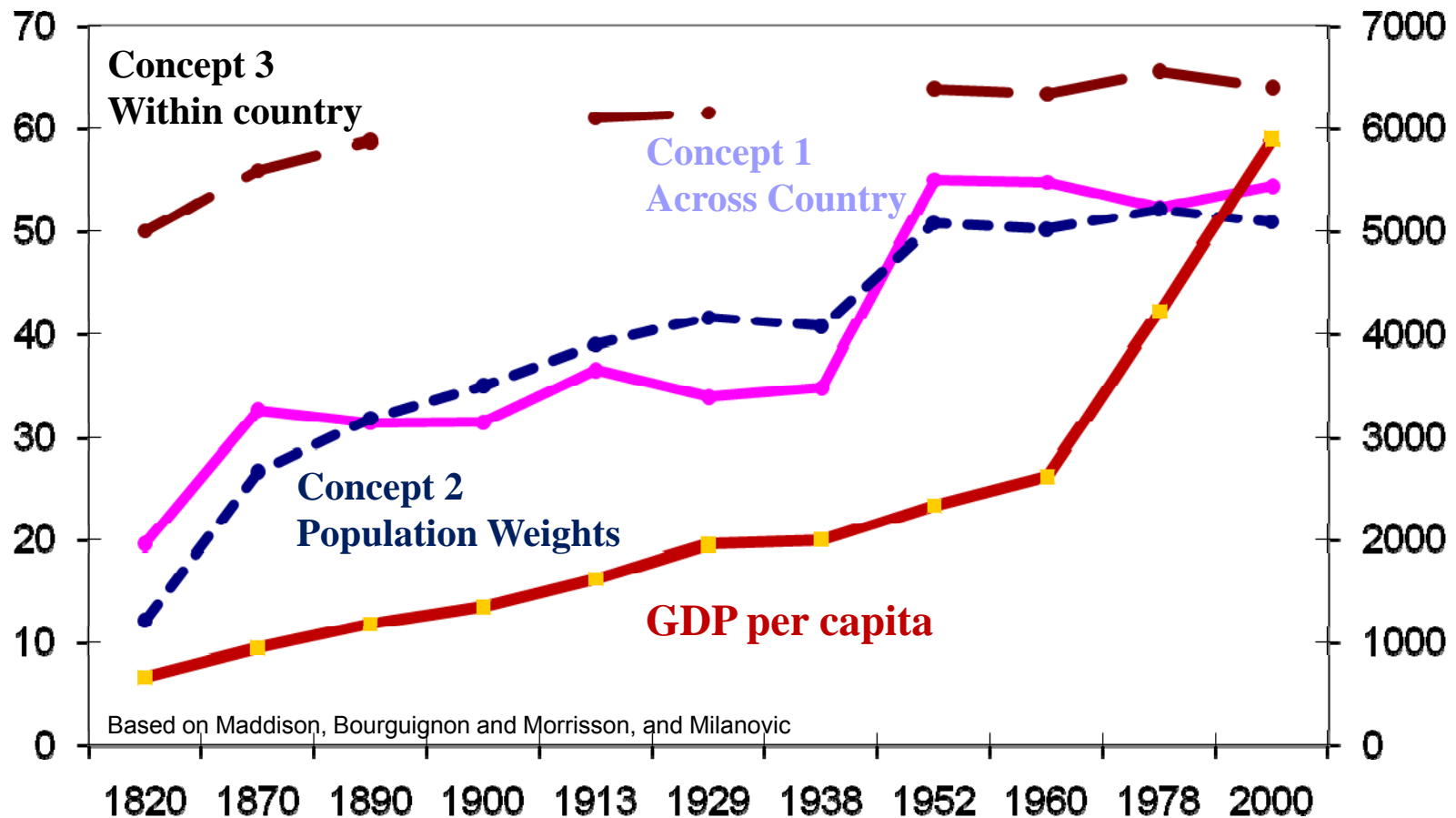
Figure 2: Poverty measures by region 1981-2004
(a) Headcount index



Note: LAC=Latin America and the Caribbean; ECA=Eastern Europe and Central Asia; SSA=Sub-Saharan Africa; SAS=South Asia; MNA=Middle-East and North Africa; EAP=East Asia and Pacific.

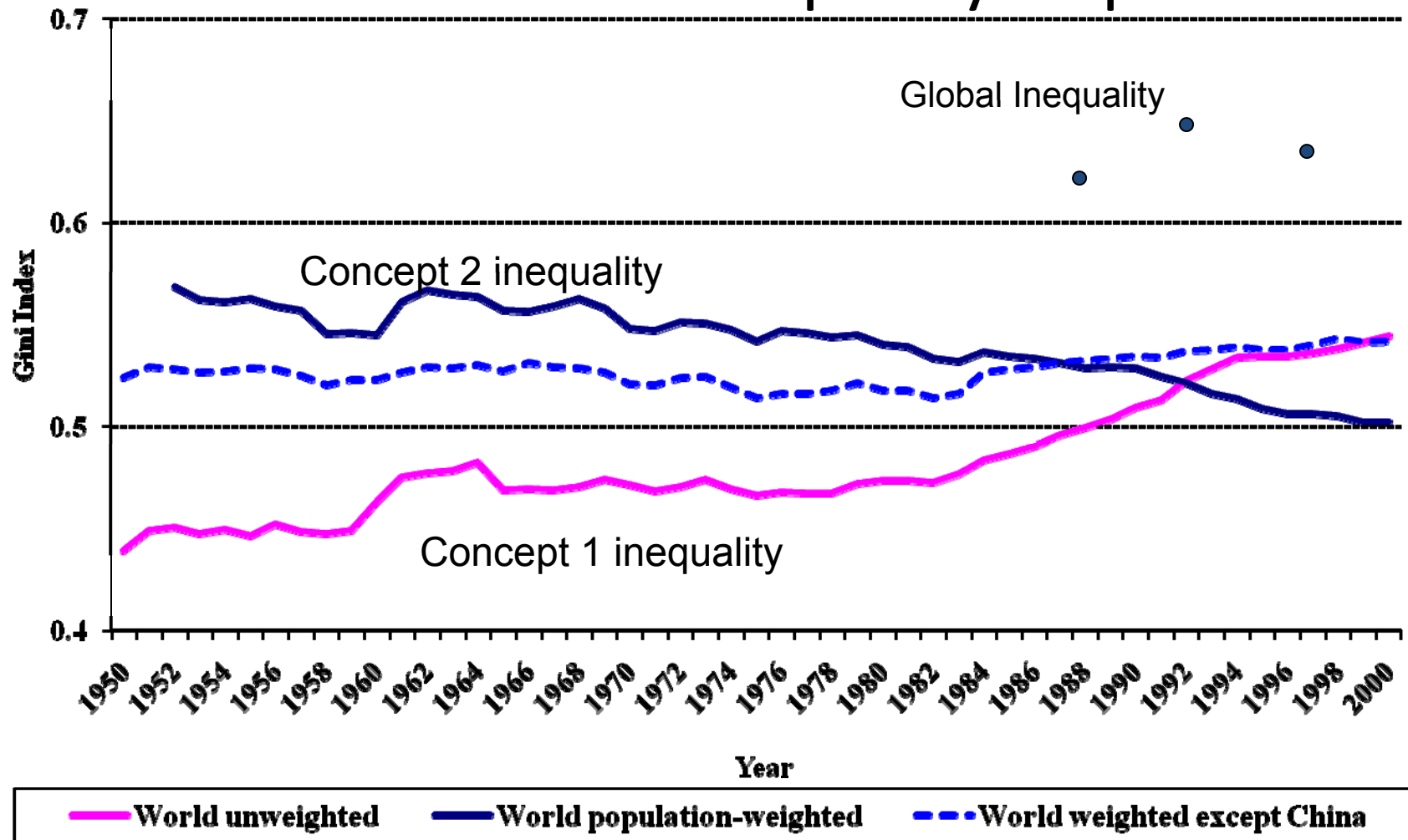
S. Chen and M. Ravallion (2007) [*Absolute Poverty Measures for the Developing World, 1981-2004*](#)

Three concepts of inequality in history: Global Gini values, 1820-2000



Branko Milanović 2005. *Worlds apart: measuring international and global inequality* Princeton University Press.

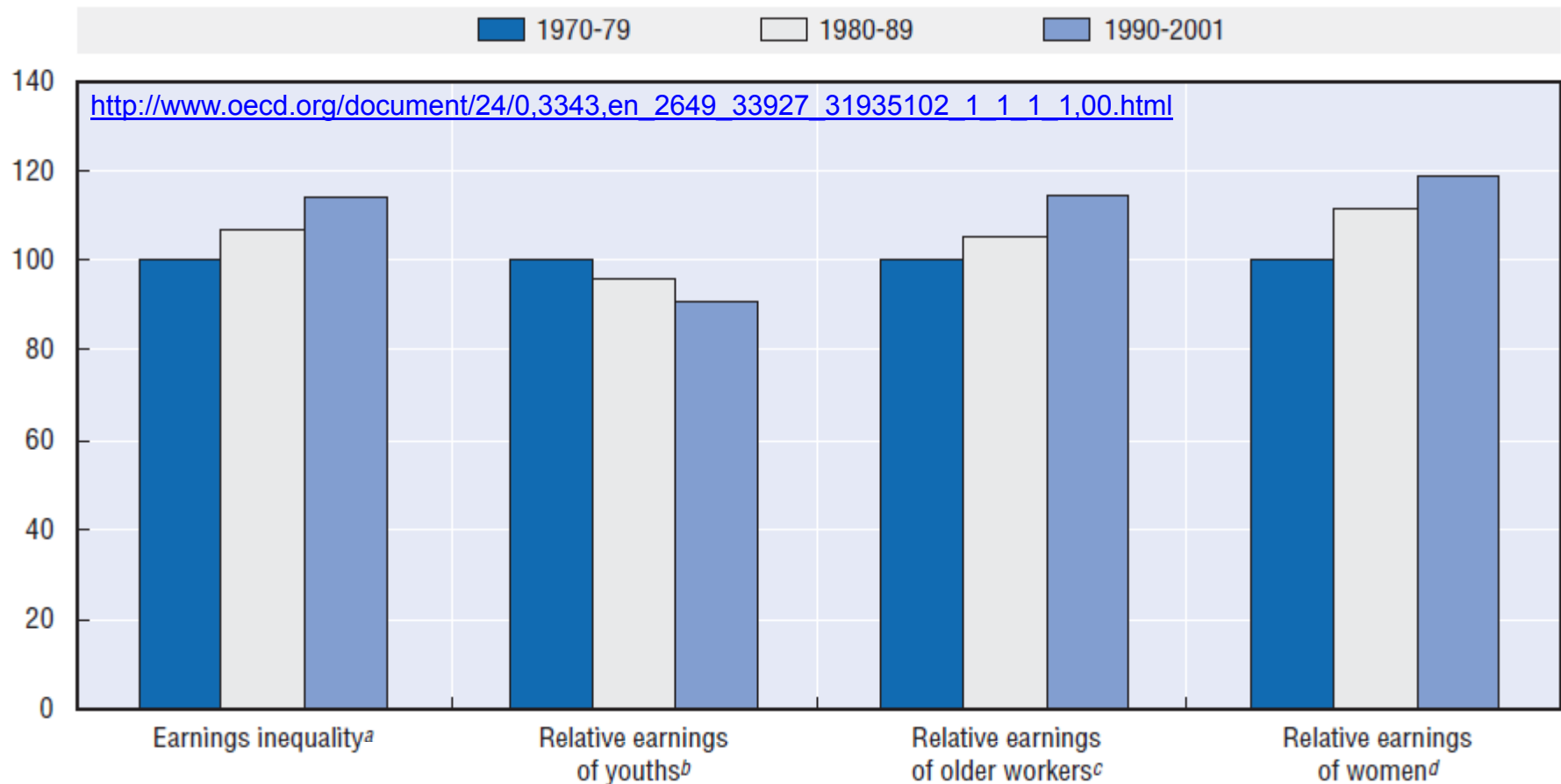
Inequality, 1950-2000: The mother of all inequality disputes



Branko Milanović 2005. *Worlds apart: measuring international and global inequality* Princeton University Press.

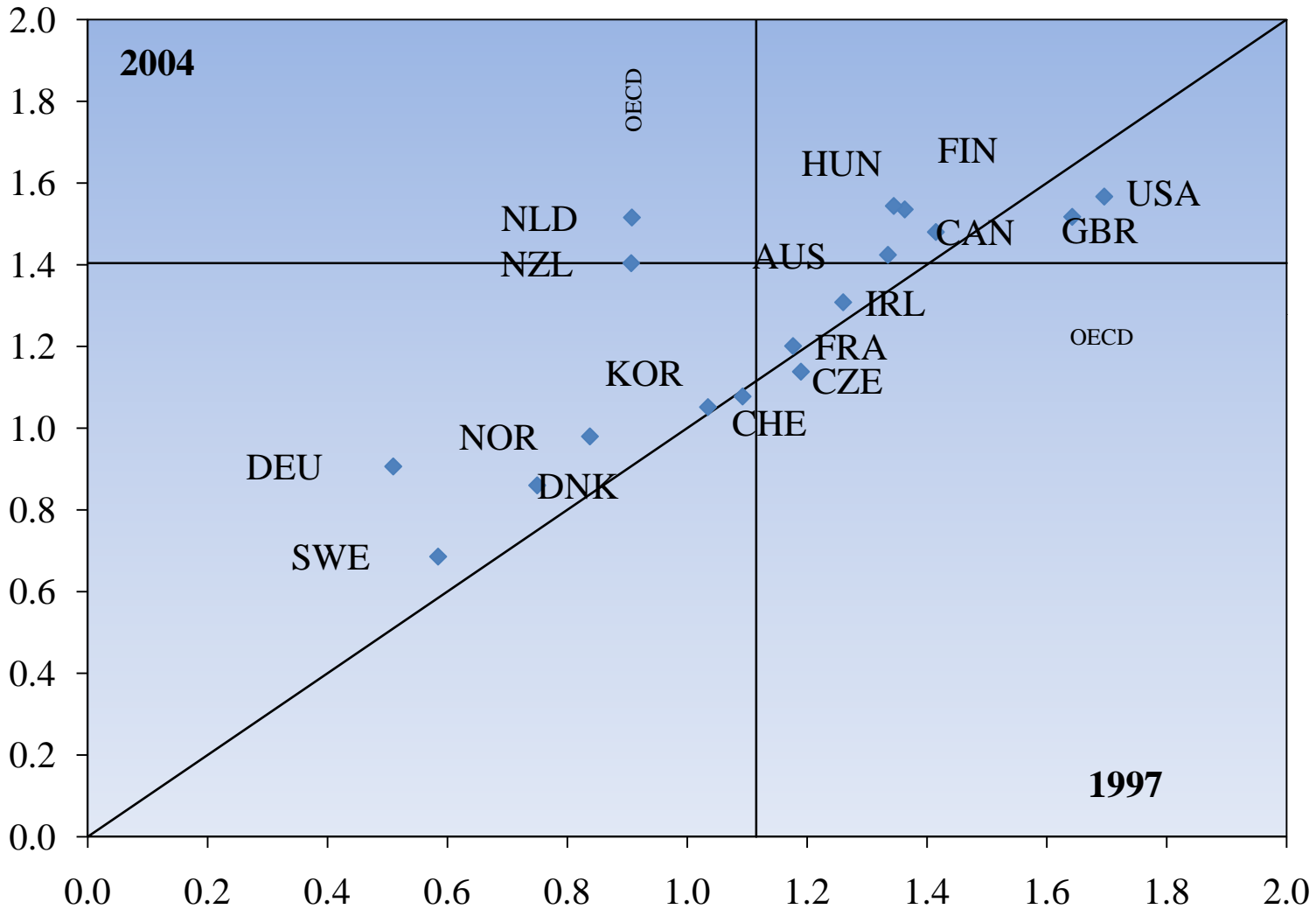
Chart 3.3. An overall trend toward rising wage dispersion, but also gains for women

Employment-weighted averages for selected OECD countries, 1970-79 = 100

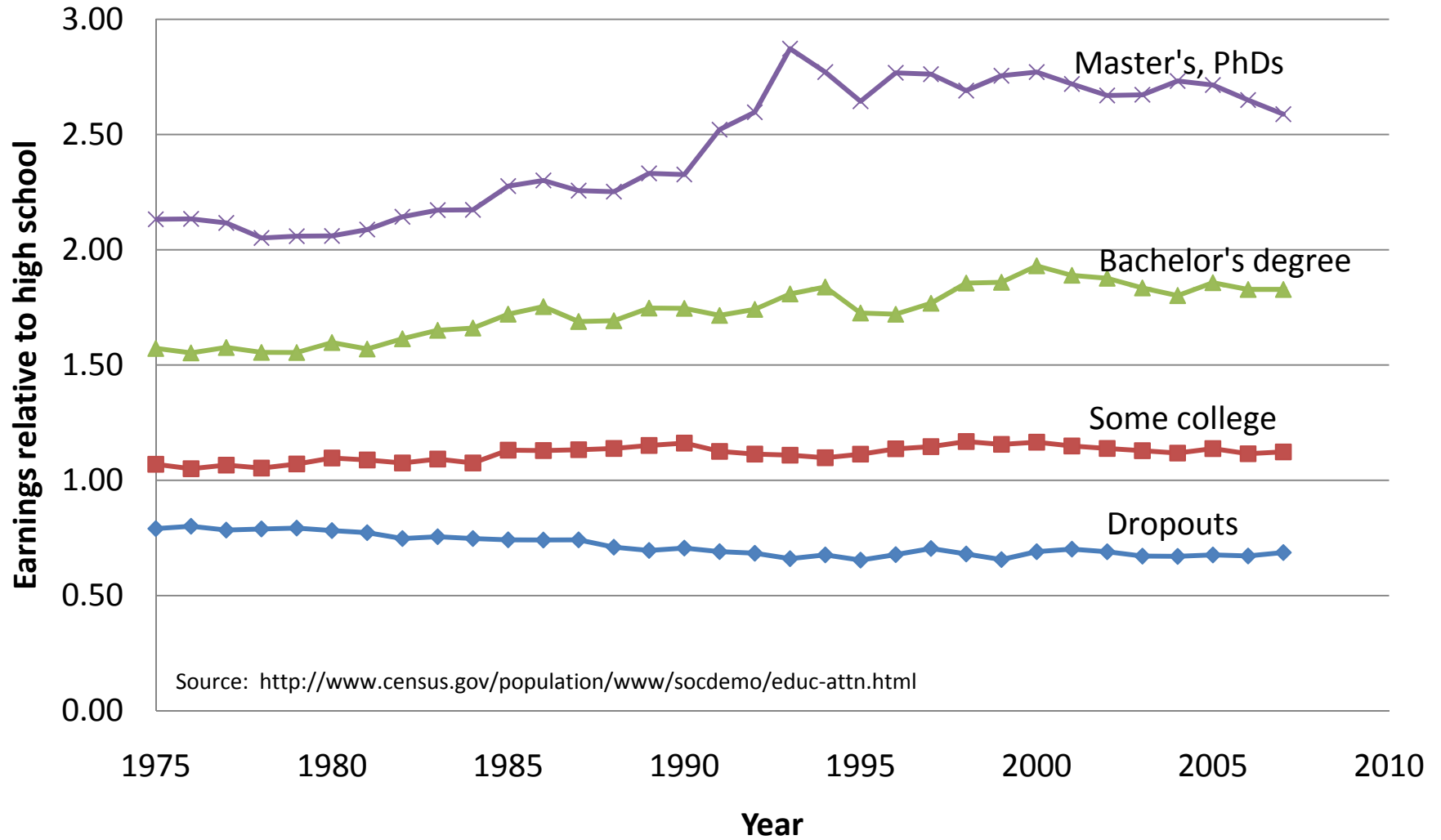


- a) 90-10 percentile ratio for full-time men, using data for Australia, Belgium, Canada, the Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Poland, Portugal, Sweden, Switzerland, the United Kingdom and the United States.
- b) Full-time earnings of men aged 15-24 years relative to men aged 25-54 years, using data for Australia, Canada, the Czech Republic, Finland, Germany, Hungary, Italy, Japan, Korea, the Netherlands, Norway, Sweden, the United Kingdom and the United States.
- c) Full-time earnings of men aged 55-64 years relative to men aged 25-54 years, using data for Australia, Canada, the Czech Republic, Finland, Germany, Hungary, Italy, Japan, the Netherlands, Sweden, the United Kingdom and the

Skill wage premia (high- to-middle-qualified youths aged 15-24), various OECD countries, 1997 and 2004



Earnings relative to the Average for High School Graduates, by education level, 1975-2007



Conclusions: “The age of inequality”?

Developing countries

Within-country inequalities have increased in many countries including in the largest (US, UK, China, India, Russia)

Inequalities **between countries** have increased
Population weighted inequality **between countries** went down thanks to fast growth in China and India

Developed countries

Rising inequality overall and between skill groups within countries

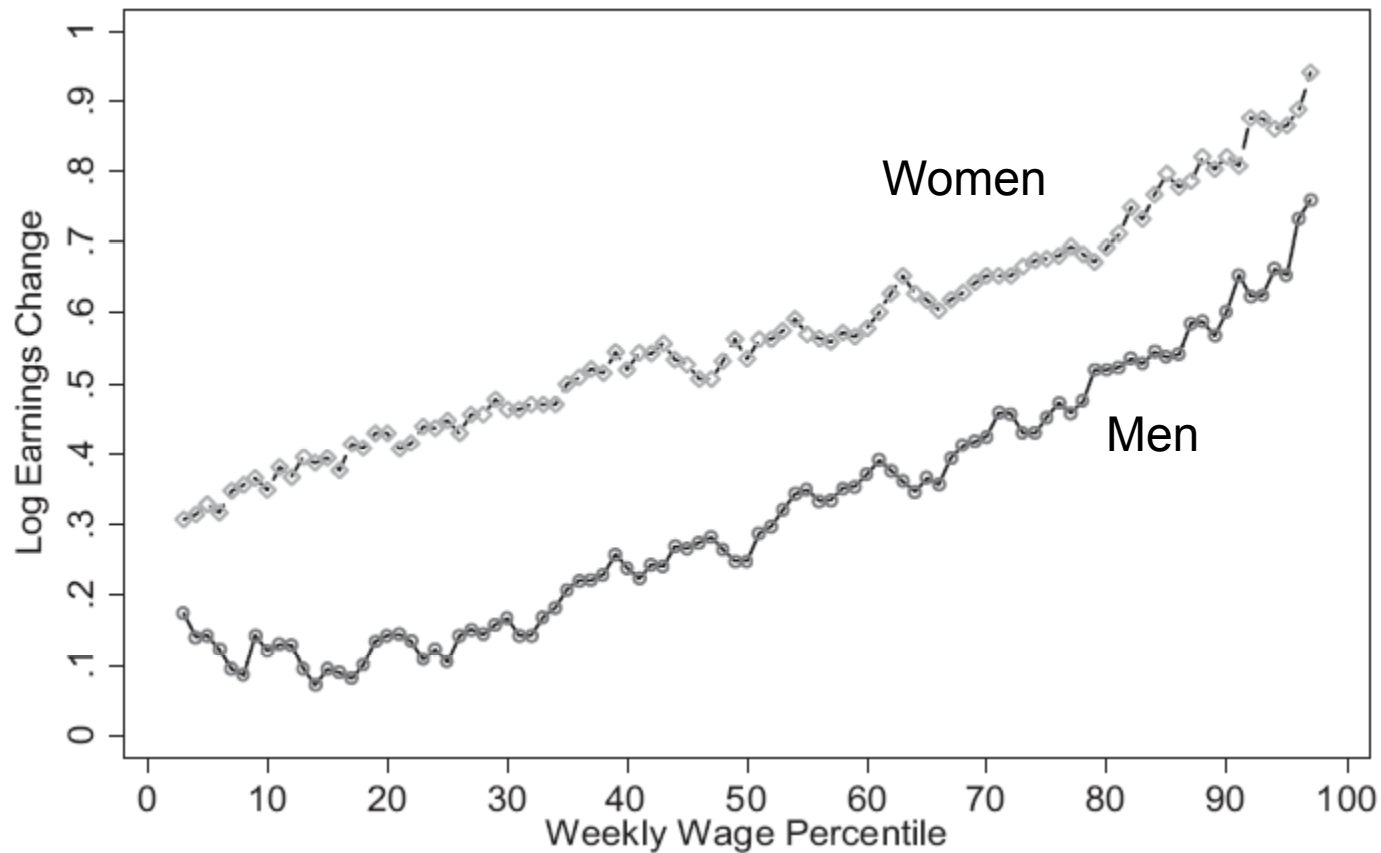
Focus on U.S. experience

TABLE 1.—CHANGES IN REAL, COMPOSITION-ADJUSTED LOG WEEKLY WAGES FOR FULL-TIME, FULL-YEAR WORKERS, 1963–2005.
(100 × CHANGE IN MEAN LOG REAL WEEKLY WAGES)

	1963–1971	1971–1979	1979–1987	1987–1995	1995–2005	1963–2005
All	19.5	0.6	−0.8	−4.8	7.6	22.2
Sex						
Men	21.1	0.1	−4.9	−7.8	6.7	15.3
Women	17.3	1.4	4.9	−0.7	9.0	31.8
Education (years of schooling)						
0–11	17.0	1.8	−8.4	−10.3	2.5	2.6
12	17.6	3.2	−3.2	−6.6	5.8	16.8
13–15	18.6	0.6	1.2	−5.3	9.5	24.6
16+	25.4	−4.2	6.8	2.8	12.5	43.3
16–17	22.9	−4.9	5.6	1.0	11.9	36.5
18+	31.3	−2.6	9.5	6.8	14.0	59.0
Experience (males)						
5 years	20.0	−3.6	−8.5	−7.6	9.0	9.3
25–35 years	21.6	3.4	−1.6	−8.1	3.8	19.2
Education and experience (males)						
Education 12						
Experience 5	19.4	0.7	−16.1	−10.3	7.1	0.7
Experience 25–35	17.0	6.3	−2.5	−7.6	0.3	13.6
Education 16+						
Experience 5	23.1	−11.0	9.3	−1.9	10.0	29.5
Experience 25–35	35.0	1.7	2.6	−2.2	13.8	50.9

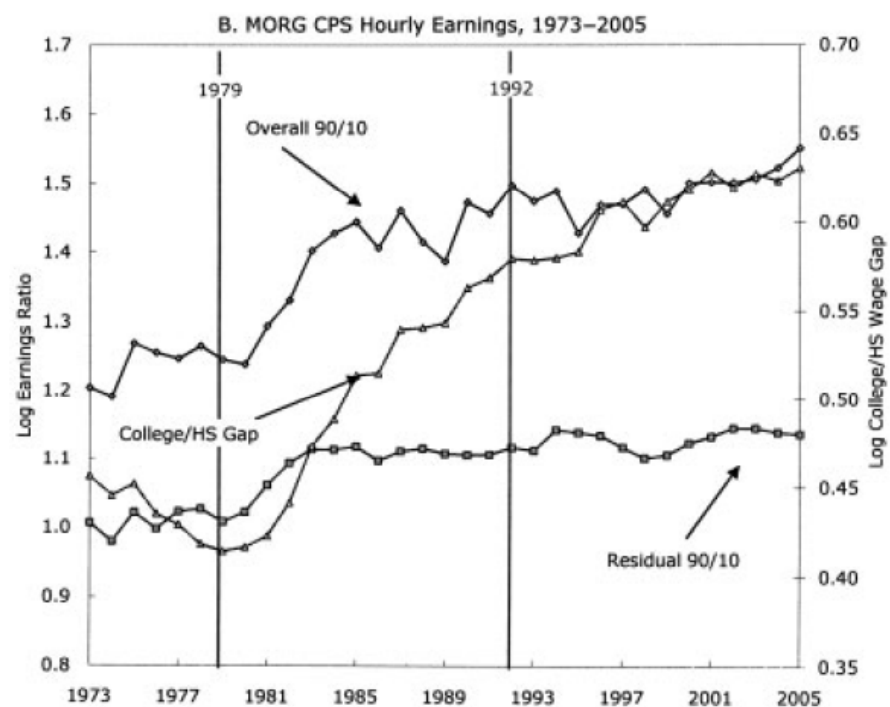
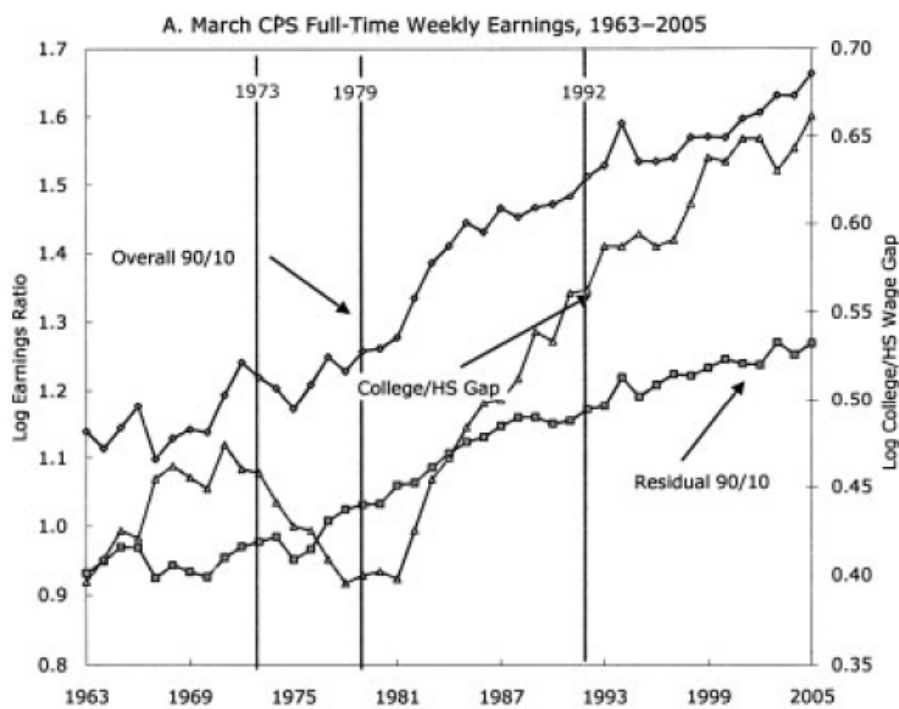
Autor, David H., Lawrence Katz and Melissa S. Kearney. “Trends in U.S. Wage Inequality: Revising the Revisionists.” *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.

FIGURE 1.—CHANGE IN LOG REAL WEEKLY WAGE BY PERCENTILE, FULL-TIME WORKERS, 1963–2005



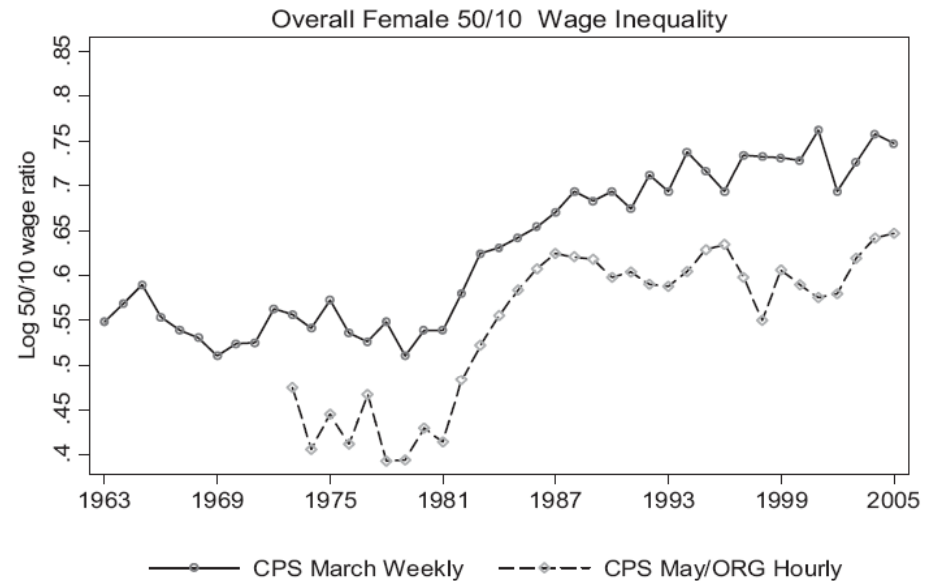
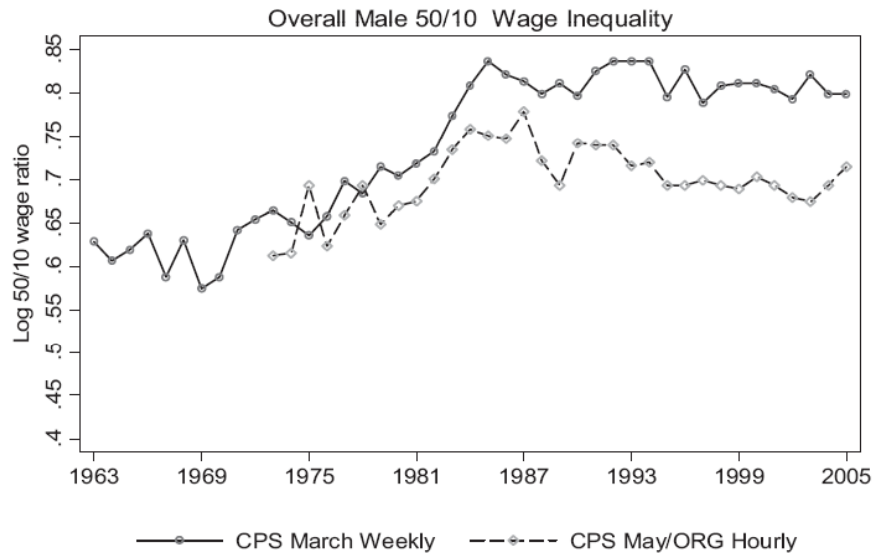
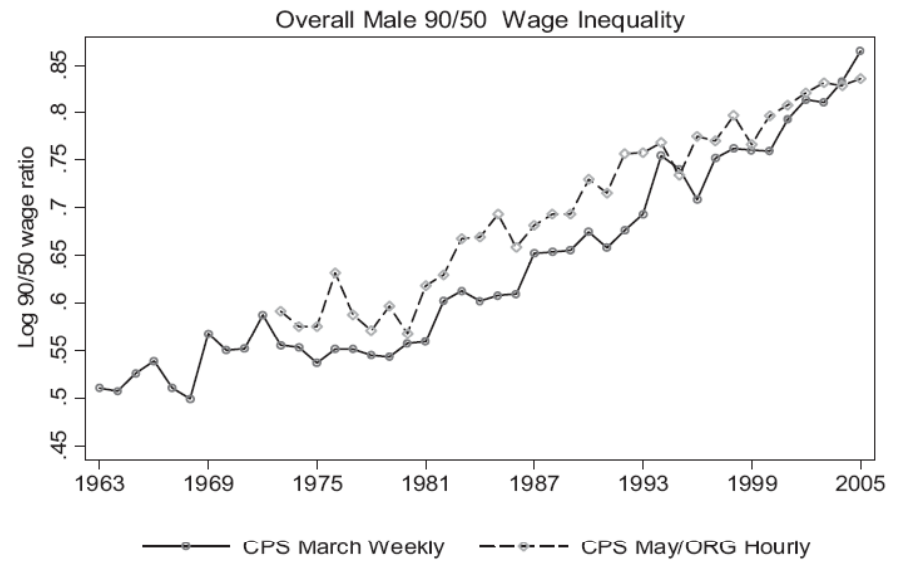
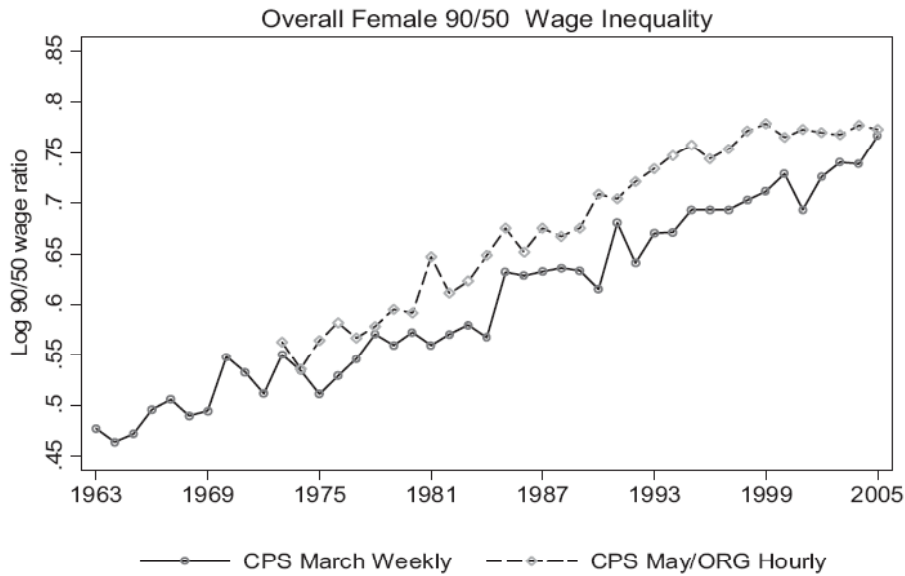
Autor, David H., Lawrence Katz and Melissa S. Kearney. "Trends in U.S. Wage Inequality: Revising the Revisionists." *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.

FIGURE 2.—THREE MEASURES OF WAGE INEQUALITY: COLLEGE/HIGH SCHOOL PREMIUM, MALE 90/10 OVERALL INEQUALITY, AND MALE 90/10 RESIDUAL INEQUALITY



Inequality rises regardless of measure although differences in timing

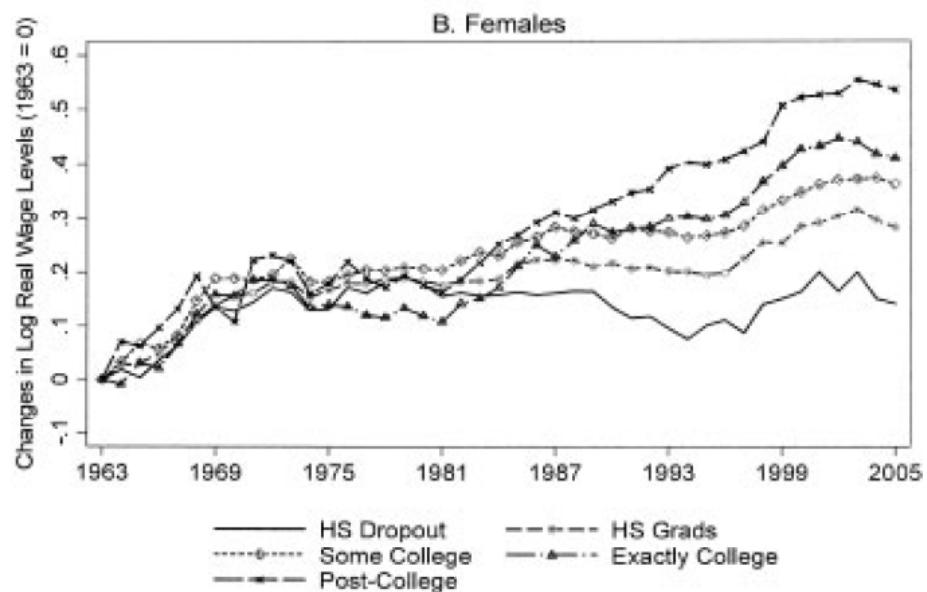
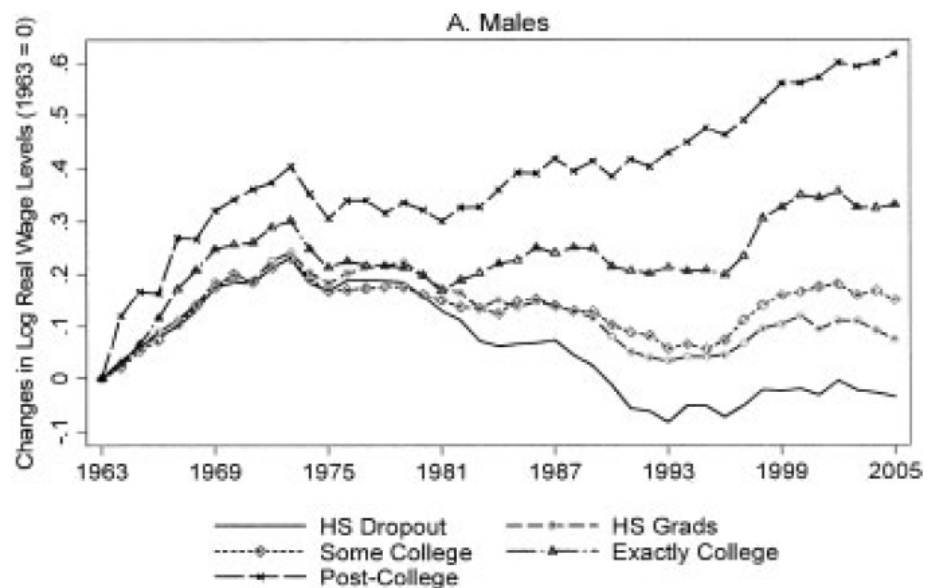
Autor, David H., Lawrence Katz and Melissa S. Kearney. "Trends in U.S. Wage Inequality: Revising the Revisionists." *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.



See notes to figure 2 for details on samples and data processing.

Autor, David H., Lawrence Katz and Melissa S. Kearney. "Trends in U.S. Wage Inequality: Revising the Revisionists." *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.

FIGURE 5.—TRENDS IN COMPOSITION-ADJUSTED REAL LOG WEEKLY FULL TIME WAGES BY GENDER AND EDUCATION, 1963–2005 (MARCH CPS)



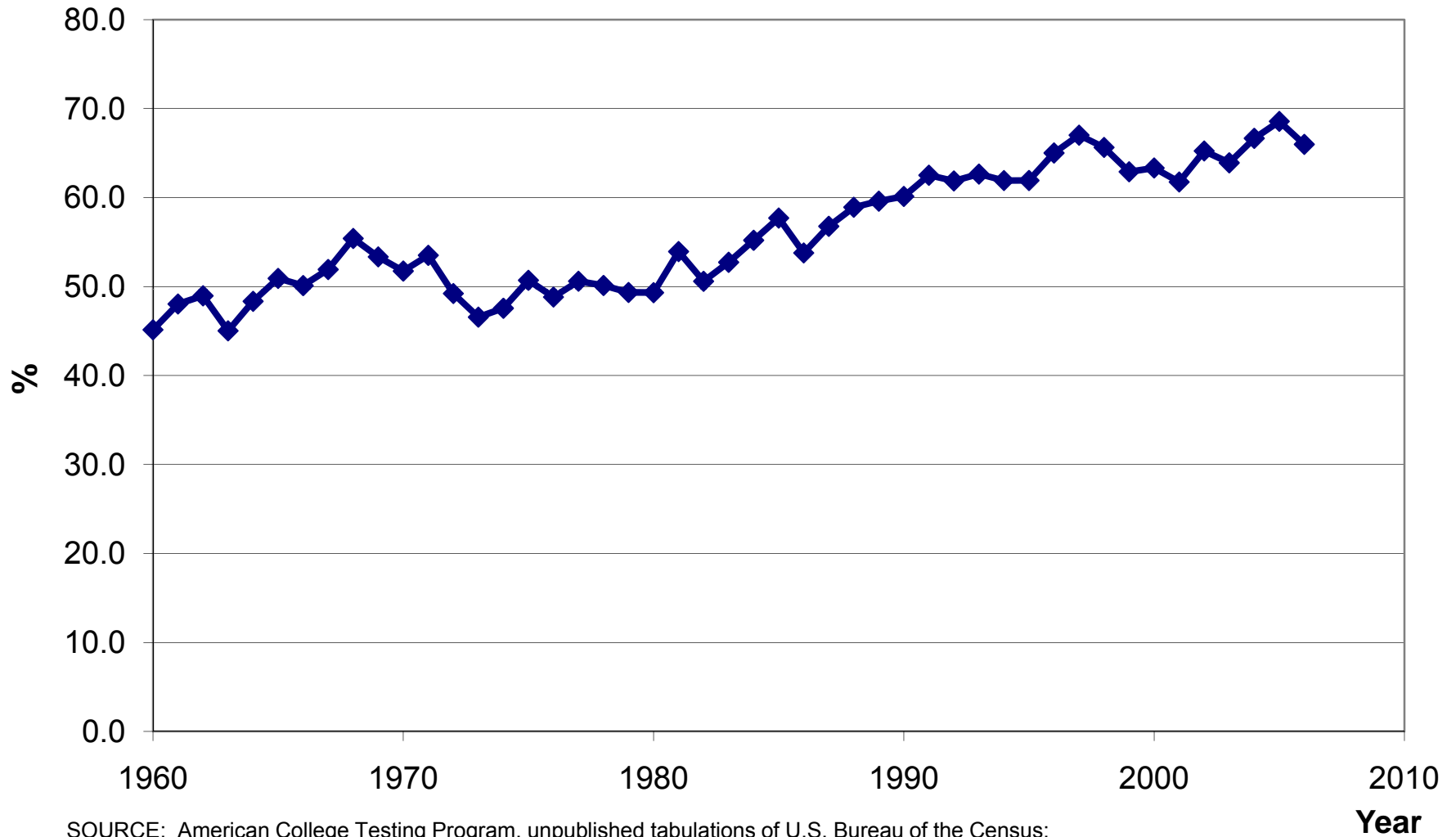
It appears that inequality has something to do with relative earnings growth by education level

Autor, David H., Lawrence Katz and Melissa S. Kearney. "Trends in U.S. Wage Inequality: Revising the Revisionists." *The Review of Economics and Statistics* 90(2) (May 2008): 300-323.

**Rising returns to education come
at a time of rising proportion of
high school graduates attending
college.**

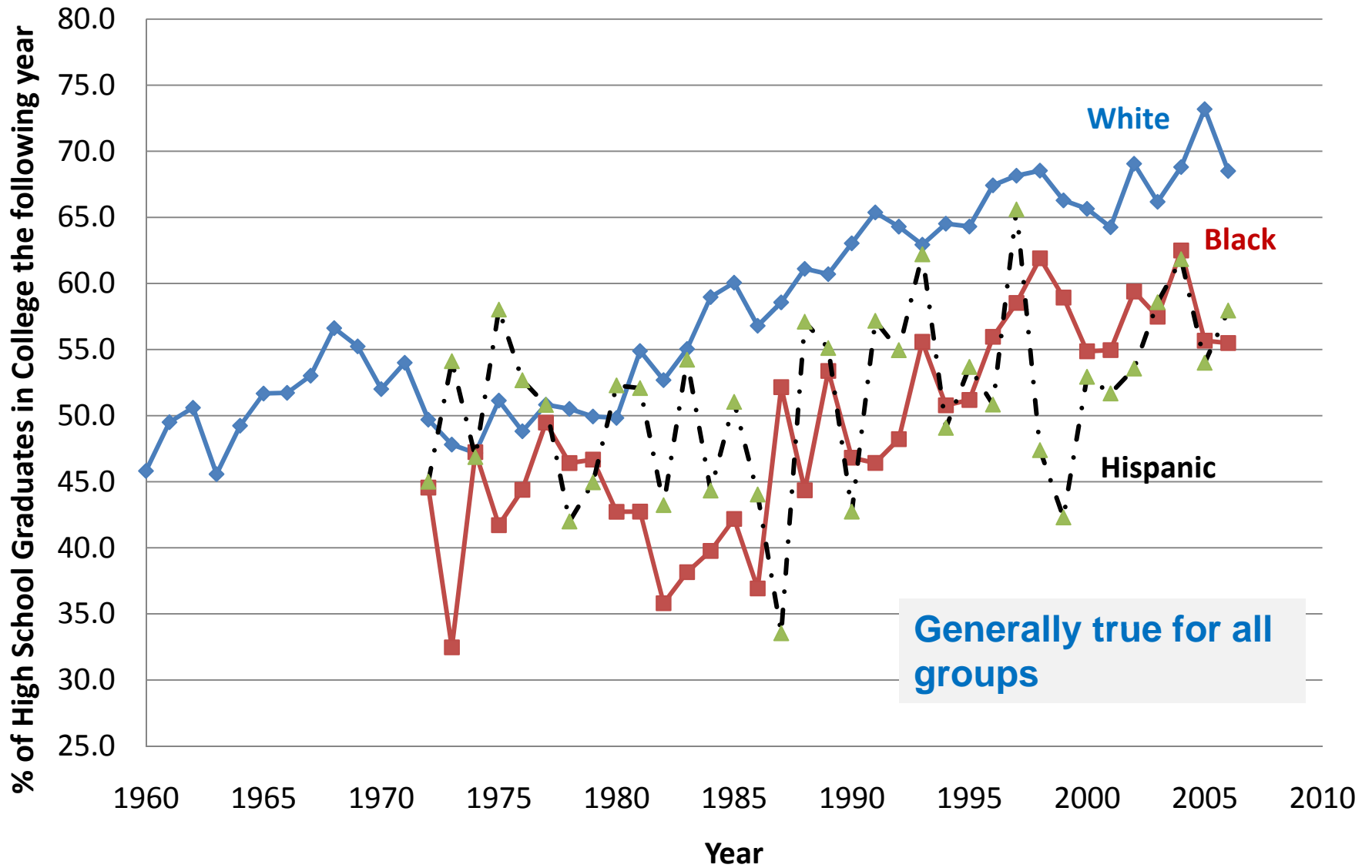
How can that happen?

% of U.S. High School Graduates Aged 16-24 who are in College One Year After Graduation, 1960-2006

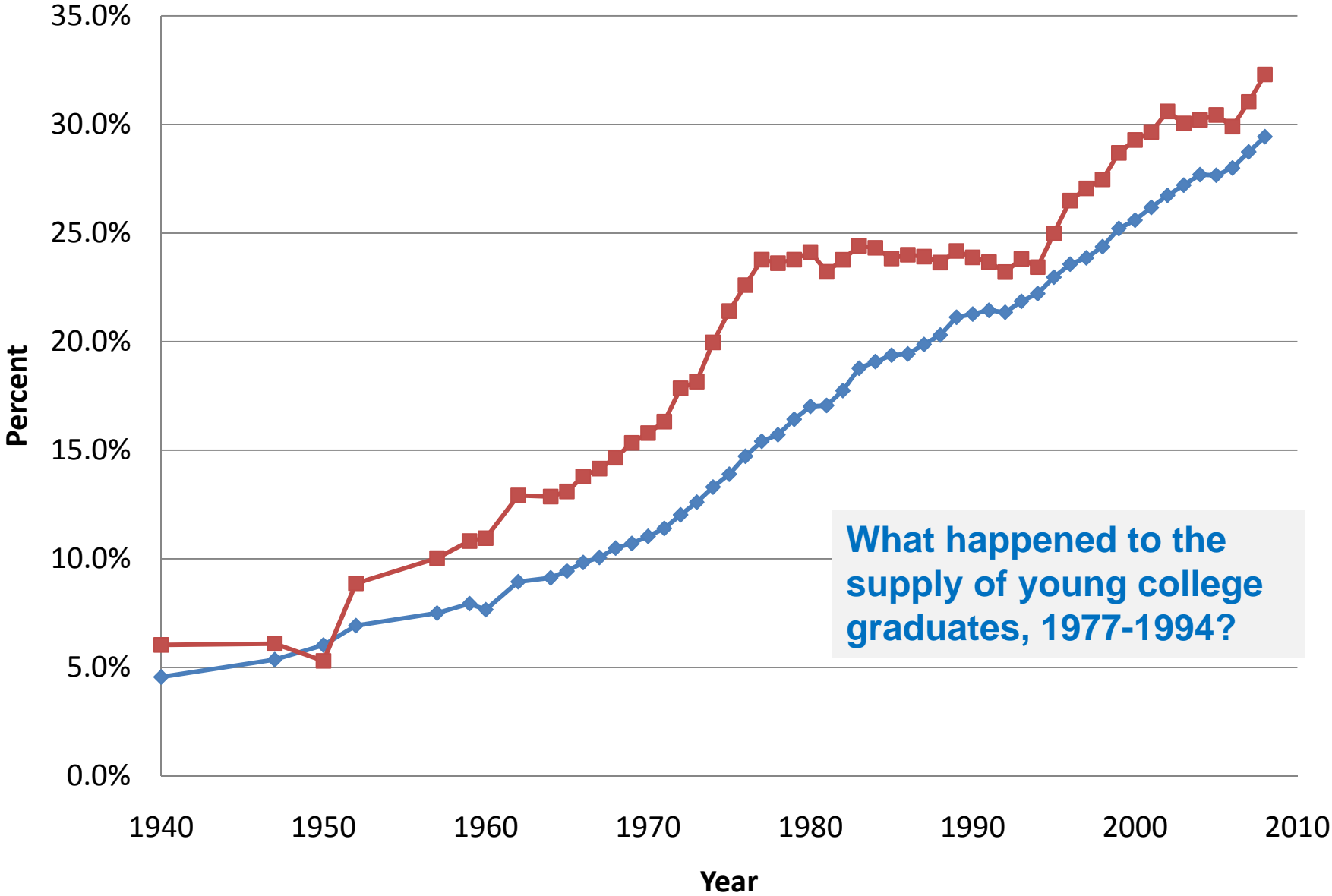


SOURCE: American College Testing Program, unpublished tabulations of U.S. Bureau of the Census; and U.S. Department of Labor, College Enrollment of High School Graduates

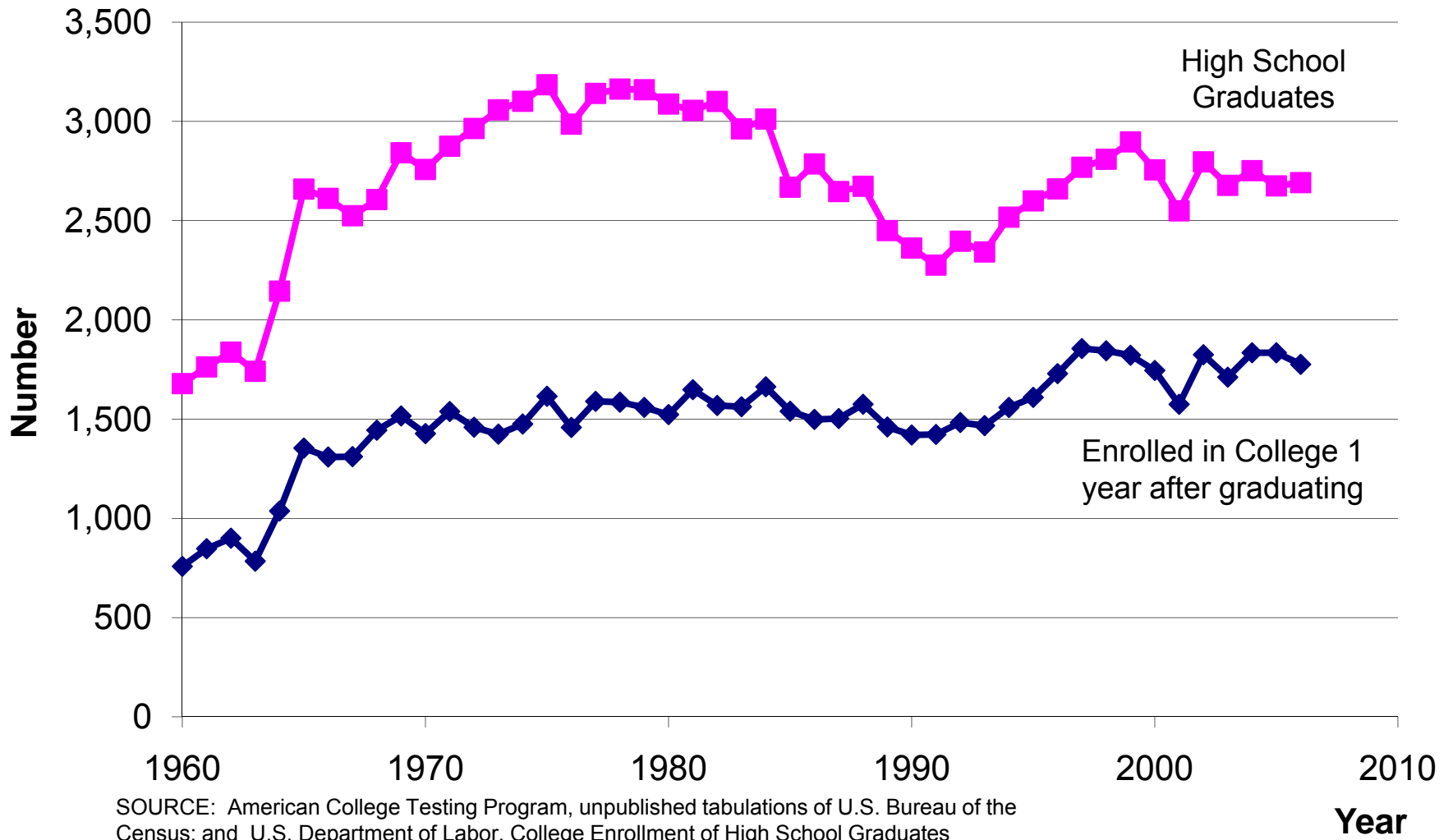
Percent of High School Graduates in College the following year, by Race and ethnicity, 1960-2006



Percentage of the U.S. population with a college degree, 1940-2008



Number of High School Graduates and College Enrollments, 1960-2006



So is the rise in returns due to a decline in supply of college graduates?

TABLE VIII
COLLEGE/HIGH SCHOOL RELATIVE WAGES, QUANTITIES, AND DEMAND SHIFTS

Variable	Log Change (multiplied by 100)					
	1963–1971	1967–1971	1971–1979	1979–1987	1963–1987	1967–1987
College/high school weekly wage ratio ^a	7.7	3.0	–10.4	12.8	10.0	5.4
Relative supply of college to high school equivalents	31.4	16.6	40.8	25.5	97.6	82.9
<u>Measured relative demand shifts—college/high school^b</u>						

No

Lawrence F. Katz and Kevin M. Murphy. 1992. “Changes in Relative Wages, 1963-1987: Supply and Demand Factors.” *The Quarterly Journal of Economics* 107 (1): 35-78

Options

The Levy-Murnane Econ 1 Test

Relative Wages

$$R = \frac{W_C}{W_H}$$

